

79. (amended) The method according to claim 55 wherein the particles comprise herbicides selected from the group consisting of 2,2-dichloropropionic acid (2,2 dichloropropirionic acid, sodium salt) ammonium sulfamate, 3,6-dichloro-o-anisic acid, cacodylic acid, 5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-N-methylsulfonyl-2-nitrobenzamide; N-(phosphonomethyl)glycine and mixtures thereof.

80. (amended) The method according to claim 55 wherein the particles comprise fungicides selected from the group consisting of copper sulfate, ethyl hydrogen phosphonate aluminum tris (O-ethyl phosphonate), methyl N-phenylacetyl-N-2, 6-xylyl-DL-alaninate, iminocytidine ($C_{18}H_{41}N_7$), 1L-1,3,4/2,5,6-1-deoxy-2,3,4,5,6-pentahydroxycyclohexy 2-amino-2,3,4,6-tetra-deoxy-4-(α -iminoglycino)- α -D-arabino-hexopyranoside and mixtures thereof.

REMARKS

Claims 1-81 remain in the referenced application. Claims 1, 20, 22-24, 28, 47, 49-51, 55, 76, 78-80 have been amended. Appended hereto are marked versions of claims 1, 20, 22-24, 28, 47, 49-51, 55, 76, 78-80 illustrating the revisions made thereto.

Claims 20, 22-24, and 28-81 stand rejected under 35 U.S.C. §112, second paragraph.

Particularly, claims 20, 47, and 76 stand rejected for containing the term "highly substituted". Responsive thereto Applicant has amended claims 20, 47, and 76 by eliminating the term "highly substituted".

Claims 22-24, 49-51, and 78-80 stand rejected for containing trademarks. Responsive thereto Applicant has amended claims 22-24, 49-51, and 78-80 by eliminating the trademarks and substituting therefor the IUPAC names for each of the trademarks.

Claim 28 stands rejected for containing the phrase "such as". Responsive thereto Applicant has amended claim 28 by eliminating the phrase "such as" and substituting therefor the term "comprising".

Claim 55 stands rejected for containing the phrase "develops desired suspension properties". Responsive thereto Applicant has amended claim 55 by eliminating the phrase "hydrogenated castor wax develops desired suspension properties" and substituting therefor the phrase "the non-aqueous suspension is a pourable or pumpable liquid that achieves a Brookfield viscosity of at least 500 centipoise".

Applicant respectfully requests the withdrawal of the 35 U.S.C. §112, second paragraph, rejection of claims 20, 22-24, and 28-81 based on the amendments made thereto.

The specification has been amended on page 3, line 1, through page 9, line 14, to recite the language added to the claims in response to the foregoing 35 U.S.C. §112, second paragraph, rejection. Appended hereto is a marked version of page 8, line 1, through page 9, line 14 of the specification.

Claims 1, 2, 4, 12, 16-19, 25-29, 31, 39, 43-46, 52-56, 58-60, 68, 72-75, and 81 stand rejected under 35 U.S.C. §102(b) by Eriksson et al. (U.S. Patent No. 3,670,065 – hereinafter referred to as Eriksson). Responsive to the above rejection, Applicant has amended claims 1, 28, and 55 to recite that the polyalkylene glycol is a liquid that suspends the solid particles therein and that the resulting non-aqueous suspension is a pourable or pumpable liquid. Eriksson discloses medicine granules cast within polyethylene glycol and hydrogenated castor oil to form a tablet. Consequently, Eriksson's polyethylene glycol is not a liquid that suspends the medicine granules and the resultant medicine is a tablet not a pourable or pumpable liquid. Applicant accordingly respectfully submits the claims as amended are not anticipated by Eriksson because Eriksson does not disclose liquid polyalkylene glycol that suspends solid particles therein thereby producing a pourable or pumpable non-aqueous liquid suspension.

Claims 1, 2, 12, 17-19, 25-29, 31, 39, 44-46, 52-56, 58, 59, 68, 73-75, and 81 stand rejected under 35 U.S.C. §102(b) by Goodhart et al. (U.S. Patent No. 3,780,170 – hereinafter referred to as Goodhart). Responsive to the above rejection, Applicant has amended claims 1, 28, and 55 to recite that the polyalkylene glycol is a liquid that suspends the solid particles therein and that the resulting non-aqueous suspension is a pourable or pumpable liquid. Goodhart discloses methenamine mandelate particles coated with polyethylene glycol and hydrogenated castor oil. Consequently, Goodhart's polyethylene glycol coats the methenamine mandelate particles and therefore is not a liquid that suspends the methenamine mandelate particles therein. Further, the methenamine mandelate particles coated with polyethylene glycol and hydrogenated castor oil is not a pourable or pumpable liquid. Applicant accordingly respectfully submits the claims as amended are not anticipated by Goodhart because

Goodhart does not disclose liquid polyalkylene glycol that suspends solid particles therein thereby producing a pourable or pumpable non-aqueous liquid suspension.

Claims 1-4, 12, 16, 25-31, 39, 43, 52-60, 68, 72, and 81 stand rejected under 35 U.S.C. §102(b) by Schmitt (U.S. Patent No. 3,629,398). Responsive to the above rejection, Applicant has amended claims 1, 28, and 55 to recite that the polyalkylene glycol is a liquid that suspends the solid particles therein and that the resulting non-aqueous suspension is a pourable or pumpable liquid. Schmitt discloses foamable toothpaste consisting of abrasives, hydrogenated castor oil, and polyethylene glycol as a thickening agent. Schmitt's polyethylene glycol is thus a thickening agent employed to produce toothpaste. As a result, Schmitt's polyethylene glycol is not a liquid that suspends the abrasives therein and the resultant product is a paste not a pourable or pumpable liquid. Applicant accordingly respectfully submits the claims as amended are not anticipated by Schmitt because Schmitt does not disclose liquid polyalkylene glycol that suspends solid particles therein thereby producing a pourable or pumpable non-aqueous liquid suspension.

Claims 1, 2, 4, 12, 16-19, 25-29, 31, 39, 43-46, 52-56, 58-60, 68, 72-75, and 81 stand rejected under 35 U.S.C. §102(b) by Heafield et al. (U.S. Patent No. 5,879,705 – hereinafter referred to as Heafield). Responsive to the above rejection, Applicant has amended claims 1, 28, and 55 to recite that the polyalkylene glycol is a liquid that suspends the solid particles therein and that the resulting non-aqueous suspension is a pourable or pumpable liquid. Heafield discloses morphine granules cast within polyethylene glycol and hydrogenated castor oil to form a pellet. Consequently, Heafield's polyethylene glycol is not a liquid that suspends the morphine granules and the resultant medicine is a pellet not a pourable or pumpable liquid. Applicant accordingly respectfully submits the claims as amended are not anticipated by Heafield because Heafield does not disclose liquid polyalkylene glycol that suspends solid particles therein thereby producing a pourable or pumpable non-aqueous liquid suspension.

Claims 1-4, 10, 11, 16-20, 25-31, 37, 38, 43-47, 52-60, 66, 67, 72-76, and 81 stand rejected under 35 U.S.C. §102(b) by Thiele et al. (U.S. Patent No. 5,648,421 – hereinafter referred to as Thiele). Responsive to the above rejection, Applicant has amended claims 1, 28, and 55 to recite that the

polyalkylene glycol is a liquid that suspends the solid particles therein and that the resulting non-aqueous suspension is a pourable or pumpable liquid. Thiele discloses a casting resin consisting of a polyol that may include polypropylene glycol as an ingredient, granular materials, and hydrogenated castor oil as a suspension aid. Thiele's polyol along with the hydrogenated castor oil provides a viscous casting resin used as a binder for the granular materials during the production of open-cell moldings. As a result, Thiele's polyol is not a liquid that suspends the granular materials therein and the resultant product is a solid open-cell molding not a pourable or pumpable liquid. Applicant accordingly respectfully submits the claims as amended are not anticipated by Thiele because Thiele does not disclose liquid polyalkylene glycol that suspends solid particles therein thereby producing a pourable or pumpable non-aqueous liquid suspension.

Claims 1-3, 12, 26-30, 39, 53-59, and 68 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-98 of copending Application No. 09/771,226. The Examiner admits claims 1-3, 12, 26-30, 39, 53-59, and 68 are not identical subject matter to claims 1-98 of copending Application No. 09/771,226. The Examiner however asserts claims 1-3, 12, 26-30, 39, 53-59, and 68 would have been obvious to one of ordinary skill in the art at the time the invention was made in view of claims 1-98 of copending Application No. 09/771,226. As the outstanding rejection is based upon the judicially created doctrine of obviousness-type double patenting, Applicant submits herewith a Terminal Disclaimer and \$55.00 statutory fee due under 37 C.F.R. §1.20(d) to overcome the outstanding rejection. In view of the submission of the Terminal Disclaimer, Applicant respectfully submits the rejection of claims 1-3, 12, 26-30, 39, 53-59, and 68 has been overcome and thus requests the withdrawal of the provisional rejection of claims 1-3, 12, 26-30, 39, 53-59, and 68 under the judicially created doctrine of obviousness-type double patenting over claims 1-98 of copending Application No. 09/771,226.

Claims 5-9, 13-15, and 21 have been indicated as allowable if rewritten in independent form. Applicant at this time has not rewritten claims 5-9, 13-15, and 21 based upon the considered allowability of claims 1, 28, and 55 as amended.


The prior art made of record has been reviewed by Applicant and is deemed not to anticipate nor render obvious the claimed invention.

In view of the foregoing, Applicant respectfully requests reconsideration of the rejected claims and earnestly solicits early allowance of the application.

Respectfully submitted,

LAW OFFICES OF CHRISTOPHER L. MAKAY
1634 Milam Building
115 East Travis Street
San Antonio, Texas 78205
(210) 472-3535

DATE: 3 April 2003

By: 
Christopher L. Makay
Reg. No. 34,475


ATTORNEY FOR APPLICANT

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post office to Addressee" service under 37 CFR 1.10 on the dated indicated below, addressed to the Assistant Commissioner for Patents, Washington, DC 20231.

Express Mail No.: EL 87306605B US

Date: 3 April 2003


Christopher L. Makay

AMENDED SPECIFICATION MARKED TO ILLUSTRATE REVISIONS

Page 8, line 1, through page 9, line 14, has been amended as follows:

SUMMARY OF THE INVENTION

In accordance with the present invention, a non-aqueous suspension includes solid particles, liquid polyalkylene glycol, and a suspension stabilizer of a hydrogenated castor oil or wax. The non-aqueous suspension includes the solid particles in an amount between about 0.1 and about 75 percent by weight of the suspension, the liquid polyalkylene glycol in an amount between about 24 and about 99.8 percent by weight of the suspension, and the suspension stabilizer in an amount between about 0.1 and about 5.0 percent by weight of the suspension. The non-aqueous suspension may further include one or more of the following additive materials: proppants, antifoaming agents, surfactants, corrosion inhibitors, pH buffers, and preservatives.

The liquid polyalkylene glycol includes polyethylene glycol, polypropylene glycol, ethylene oxide propylene oxide block copolymers, and mixtures thereof. The liquid polyalkylene glycol may include between about 0.1 and 4% by weight of the polyalkylene glycol of a thickener including partially neutralized polyacrylic acid, hydroxypropyl cellulose, [highly substituted] hydroxypropyl guar, fumed silica, hydrophobic silica, and mixtures thereof.

The solid particles include non-polymeric particles that are either inorganic particles or organic particles. The inorganic particles include boron compounds; alkaline earth peroxides; magnesium peroxide or calcium peroxide; iron oxide; calcium aluminate, calcium carbonate, magnesium carbonate, calcium oxide, magnesium oxide, calcium hydroxide and magnesium hydroxide and mixtures thereof; and siliceous or ceramic particles. The organic particles include gilsonite; lignosulfonates and the sodium, potassium, ammonium, calcium and magnesium salts thereof; and ethylenediaminetetraacetic acid and the salts thereof. The particles further include fertilizers selected from the group consisting of potassium nitrate, ammonium dihydrogenphosphate, ammonium nitrate, sodium nitrate ammonium phosphate, ammonium polyphosphate, potassium hydrogen phosphate, disodium hydrogen phosphate, urea, and mixtures thereof. The particles still further include pesticides selected from the group consisting of boric

acid, butocarboxime, acephate (O,S,-dimethyl acetylphosphoramidothioate), dimethoate, dimehypo (disodium salt of dihydrogen S,S'-(2-dimethylaminotrimethylene)di(thiosulfate)), vamidothion (O,O-dimethyl S-2-(1-methylcarbamoylethylthio)ethyl phosphorothioate), methomyl (S-methyl (EZ)-N-(methylcarbamoyloxy)thioacetamide) and mixtures thereof. The particles even further include herbicides selected from the group consisting of dalapon (2,2 dichloropropirionic acid, sodium salt) ammonium sulfamate (2,2-dichloropropionic acid (2,2 dichloropropirionic acid, sodium salt) ammonium sulfamate), dicamba (3,6-dichloro-o-anisic acid), cacodylic acid, fomesafen (5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-N-methylsulfonyl-2-nitrobenzamide); glyphosate (N-(phosphonomethyl)glycine) and mixtures thereof. The particles yet further include fungicides selected from the group consisting of copper sulfate, fosetyl-Al aluminum tris (O-ethyl phosphonate) (ethyl hydrogen phosphonate aluminum tris (O-ethyl phosphonate)), benalaxyl (methyl N-phenylacetyl-N-2, 6-xylyl-DL-alaninate), guazatine (iminotadine (C₁₈H₄₁N₇)), kasugamycin (1L-1,3,4/2,5,6-1-deoxy-2,3,4,5,6-pentahydroxycyclhexy 2-amino-2,3,4,6-tetradexy-4-(α -iminoglycino)- α -D-arabino-hexopyranoside) and mixtures thereof.

In a method of formulating a non-aqueous suspension, solid particles from about 0.1 to about 75% suspension weight and a hydrogenated castor wax or oil from about 0.1 to about 5.0% suspension weight are dispersed into from about 24 to about 99.8% suspension weight of liquid polyalkylene glycol. The solid particles, hydrogenated castor wax or oil, and liquid polyalkylene glycol are mixed until the solid particles are uniformly dispersed in the liquid polyalkylene glycol and the [hydrogenated castor wax has developed desired suspension properties] non-aqueous suspension is a pourable or pumpable liquid that achieves a Brookfield viscosity of at least 500 centipoise.

AMENDED CLAIMS MARKED TO ILLUSTRATE REVISIONS

1. (amended) A non-aqueous suspension, comprising:
 - (a) solid particles;
 - (b) liquid polyalkylene glycol that suspend the solid particles therein; and
 - (c) a suspension stabilizer comprising a hydrogenated castor oil or wax, whereby the non-aqueous suspension is a pourable or pumpable liquid.

20. (amended) The non-aqueous suspension according to claim 1 wherein the liquid polyalkylene glycol further comprises between about 0.1 and 4% by weight of the liquid polyalkylene glycol of a thickener selected from the group consisting of partially neutralized polyacrylic acid, hydroxypropyl cellulose, [highly substituted] hydroxypropyl guar, fumed silica, hydrophobic silica, and mixtures thereof.
22. (amended) The non-aqueous suspension according to claim 1 wherein the particles comprise pesticides selected from the group consisting of boric acid, butocarboxime, [acephate] O,S,-dimethyl acetylphosphoramidothioate, dimethoate, [dimehypo] disodium salt of dihydrogen S,S'-(2-dimethylaminotrimethylene)di(thiosulfate), [vamido...ion] O,O-dimethyl S-2-(1-methylcarbamoyl ethylthio)ethyl phosphorothioate, [methomyl] S-methyl (EZ)-N-(methylcarbamoyloxy)thioacetamide and mixtures thereof.
23. (amended) The non-aqueous suspension according to claim 1 wherein the particles comprise herbicides selected from the group consisting of [dalapon] 2,2-dichloropropionic acid (2,2 dichloropropirionic acid, sodium salt) ammonium sulfamate, [dicamba] 3,6-dicloro-o-anisic acid, cacodylic acid, [fomesafen] 5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-N-methylsulfonyl-2-nitrobenzamide; [glyphosate] N-(phosphonomethyl)glycine and mixtures thereof.
24. (amended) The non-aqueous suspension according to claim 1 wherein the particles comprise fungicides selected from the group consisting of copper sulfate, [fosetyl-Al] ethyl hydrogen phosphonate aluminum tris (O-ethyl phosphonate), [benalaxyl] methyl N-phenylacetyl-N-2, 6-xylyl-DL-alaninate, [guazatine] iminotadine (C₁₈H₄₁N₇), [kasugamycin] 1L-1,3,4/2,5,6-1-deoxy-2,3,4,5,6-pentahydroxycyclhexy 2-amino-2,3,4,6-tetradeoxy-4-(α -iminoglycino)- α -D-arabino-hexopyranoside and mixtures thereof.

28. (amended) A composition comprising environmental chemical;[,] agricultural chemical;[,] paper chemical;[,] textile chemical;[,] construction or building product ingredient comprising [(such as) paint, joint cement, textured finishing compound();[,] cosmetic ingredients;[,] hair spray;[,] gelatin substitute;[,] ceramic material;[,] cleaning composition;[,] polish;[,] ink;[,] fire-fighting chemical;[,] metal-working chemical;[,] adhesive chemical;[,] explosive chemical;[,] flocculent;[,] water treatment compound;[,] binder chemical for sand;[,] ores or coal or oil field chemical that includes a non-aqueous suspension, comprising:

(a) solid particles;

(b) liquid polyalkylene glycol that suspends the solid particles therein; and

(c) a suspension stabilizer comprising a hydrogenated castor oil or wax, whereby the non-aqueous suspension is a pourable or pumpable liquid.

47. (amended) The non-aqueous suspension according to claim 28 wherein the liquid polyalkylene glycol further comprises between about 0.1 and 4% by weight of the liquid polyalkylene glycol of a thickener selected from the group consisting of partially neutralized polyacrylic acid, hydroxypropyl cellulose, [highly substituted] hydroxypropyl guar, fumed silica, hydrophobic silica, and mixtures thereof.

49. (amended) The non-aqueous suspension according to claim 28 wherein the particles comprise pesticides selected from the group consisting of boric acid, butocarboxime, [acephate] O,S,-dimethyl acetylphosphoramidothioate, dimethoate, [dimehypo] disodium salt of dihydrogen S,S'-(2-dimethylaminotrimethylene)di(thiosulfate), [vamidothion] O,O-dimethyl S-2-(1-methylcarbamoylthio)ethyl phosphorothioate, [methomyl] S-methyl (EZ)-N-(methylcarbamoyloxy)thioacetamide and mixtures thereof.

50. (amended) The non-aqueous suspension according to claim 28 wherein the particles comprise herbicides selected from the group consisting of [dalapon] 2,2-dichloropropionic acid (2,2-dichloropropionic acid, sodium salt) ammonium sulfamate, [dicamba] 3,6-dichloro-o-anisic acid, cacodylic acid, [fomesafen] 5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-N-methylsulfonyl-2-nitrobenzamide; [glyphosate] N-(phosphonomethyl)glycine and mixtures thereof.

51. (amended) The non-aqueous suspension according to claim 28 wherein the particles comprise fungicides selected from the group consisting of copper sulfate, [fosetyl-Al] ethyl hydrogen phosphonate aluminum tris (O-ethyl phosphonate), [benalaxyl] methyl N-phenylacetyl-N-2, 6-xylyl-DL-alaninate, [guazatine] iminotadine (C₁₈H₄₁N₇), [kasugamycin] 1L-1,3,4/2,5,6-1-deoxy-2,3,4,5,6-pentahydroxycyclhexy 2-amino-2,3,4,6-tetradecoxy-4-(α -iminoglycino)- α -D-arabino-hexopyranoside and mixtures thereof.

55. (amended) A method of formulating a non-aqueous suspension, comprising:

dispersing solid particles and a hydrogenated castor wax or oil into liquid polyalkylene glycol;
and

mixing the solid particles, the hydrogenated castor wax or oil, and the liquid polyalkylene glycol until the solid particles are uniformly dispersed in the liquid polyalkylene glycol and the non-aqueous suspension is a pourable or pumpable liquid that achieves a Brookfield viscosity of at least 500 centipoise [hydrogenated castor wax develops desired suspension properties].

76. (amended) The method according to claim 55 wherein the liquid polyalkylene glycol further comprises between about 0.1 and 4% by weight of the liquid polyalkylene glycol of a thickener selected from the group consisting of partially neutralized polyacrylic acid, hydroxypropyl cellulose, [highly substituted] hydroxypropyl guar, fumed silica, hydrophobic silica, and mixtures thereof.

78. (amended) The method according to claim 55 wherein the particles comprise pesticides selected from the group consisting of boric acid, butocarboxime, [acephate] O,S,-dimethyl acetylphosphoramidothioate, dimethoate, [dimehypo] disodium salt of dihydrogen S,S'-(2-dimethylaminotrimethylene)di(thiosulfate), [vamidothion] O,O-dimethyl S-2-(1-methylcarbamoylthio)ethyl phosphorothioate, [methomyl] S-methyl (EZ)-N-(methylcarbamoyloxy)thioacetamide and mixtures thereof.

79. (amended) The method according to claim 55 wherein the particles comprise herbicides selected from the group consisting of [dalapon] 2,2-dichloropropionic acid (2,2 dichloropropirionic acid, sodium salt) ammonium sulfamate, [dicamba] 3,6-dicloro-o-anisic acid, cacodylic acid, [fomesafen] 5-(2-chloro- α,α,α -trifluoro-p-tolyloxy)-N-methylsulfonyl-2-nitrobenzamide; [glyphosate] N-(phosphonomethyl)glycine and mixtures thereof.

80. (amended) The method according to claim 55 wherein the particles comprise fungicides selected from the group consisting of copper sulfate, [fosetyl-Al] ethyl hydrogen phosphonate aluminum tris (O-ethyl phosphonate), [benalaxyl] methyl N-phenylacetyl-N-2, 6-xylyl-DL-alaninate, [guazatine] iminotadine (C₁₈H₄₁N₇), [kasugamycin] 1L-1,3,4/2,5,6-1-deoxy-2,3,4,5,6-pentahydroxycyclohexy 2-amino-2,3,4,6-tetradeoxy-4-(α -iminoglycino)- α -D-arabino-hexopyranoside and mixtures thereof.